

20010227.ba v03\_n115.bam.20010227

>From ???@??? Tue Feb 27 15:49:18 2001 -0600  
Date: Tue, 27 Feb 2001 15:46:38 CST  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 3115  
Message-Id: <20010227225923.5E6B538D5@devel43.theporch.com>

BOATANCHORS Digest 3115

Topics covered in this issue include:

- 1) BN?  
by Don Reaves <dr@cei.net>
- 2) Command Sets, Misc FS  
by Merz Donald S <merz.ds@mellon.com>
- 3) Re: WTB: TMC A-1397 PS  
by Roy Morgan <roy.morgan@nist.gov>
- 4) RE: ART-13 Trouble  
by "ROBERT W. DOWNS" <RWDowns\_WA5CAB@compuserve.com>
- 5) PS issues redux  
by "A. B. Bonds" <ab@vuse.vanderbilt.edu>
- 6) Re: [MilSurplus] BN?  
by W7QH0@aol.com
- 7) Re: PS issues redux  
by "Mike B. Feher" <n4fs@monmouth.com>
- 8) Swan 1200 Knobs Needed  
by "Bill Weinel" <tuberadio@mindspring.com>
- 9) WTT - Halli TV Svc. Manuals  
by "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
- 10) Re: PS issues redux  
by Arden Allen <gumbear@pacbell.net>
- 11) Re: [MilSurplus] BN?  
by Don Reaves <dr@cei.net>
- 12) The Duke & the TCS  
by "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
- 13) "5 watt frequency"  
by "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
- 14) BC-604, BN units available, LA area  
by Don Reaves <dr@cei.net>
- 15) Re: [MilSurplus] BN?  
by W7QH0@aol.com
- 16) Dalton Hamfest Photos  
by Allen Cutts <cacutts@mindspring.com>
- 17) Gone  
by "Roberta J. Barmore" <rbarmore@email.msn.com>
- 18) Panoramic Panadaptor lives

by Richard Post <post@ouvaxa.cats.ohiou.edu>  
19) FS: Power transformers  
by "Joseph W. Pinner" <kc5ijd@sprintmail.com>  
20) Re: Panoramic Panadaptor lives  
by jan@skirrow.org  
21) Re: PS issues redux  
by jan@skirrow.org  
22) RE: PS issues redux  
by Morris Odell <Morris0@vifp.monash.edu.au>

-----  
Date: Sun, 25 Feb 2001 22:28:54 -0600 (CST)  
From: Don Reaves <dr@cei.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
cc: <milsurplus@qth.net>  
Subject: BN?  
Message-ID: <Pine.LNX.4.30.0102252225130.20871-100000@wa5bbs.radiohome.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

The following is from the tag. Can you help identify?

Model BN  
Radio Transmitting and Receiving Equipment  
Supply 105-125V 1 0 50-125  
Serial 875  
Navy Dept  
Bureau of Ships  
Contractor Farnsworth Television and Radio Corp

--  
Don Reaves W50R Little Rock AR

-----  
Message-ID: <20010226155101.13750.qmail@mellon.com>  
From: Merz Donald S <merz.ds@mellon.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Command Sets, Misc FS  
Date: Mon, 26 Feb 2001 10:45:22 -0500  
MIME-Version: 1.0  
Content-Type: text/plain

FOR SALE

These are headed for eBay unless someone here wants them.

BC-696 command set transmitter 3-4mc. Part of SCR-274N, Bare  
aluminum finish. Made by Western Electric. Ham-modified with

S0-239, xtal and key jacks on front panel. Nicely converted. \$22

CCT-52232 (Navy ATA) command set transmitter 2.1-3mc made by Stromberg Carlson. No modifications. Near mint in appearance. But bottom cover is missing. \$48

BC-455-B command set receiver. 6-9.1mc. Part of SCR-274N, Bare aluminum finish. Ham modified in the FT-230 area and power socket wiring. No unoriginal holes. Nomenclature tag is missing. \$26

BC-455-B command set receiver 6-9.1mc. Part of SCR-274N. Bare aluminum finish. Ham modified in FT-230 area and rear power socket replaced with octal. The nut is missing from the tuning dial. No unoriginal holes. \$26

R-23/ARC-5 190kc-550kc command set receiver. Part of AN/ARC-5 Navy set. Black wrinkle finish. Ham modified in FT-230 area only. No unoriginal holes or chassis wiring changes. All original connectors. \$24

T-20/ARC-5 command set transmitter 4-5.3mc. Part of AN/ARC-5 Navy set. Black wrinkle finish. Ham modified with S0-239, xtal and key jacks on front panel. Also extensive chassis wiring changes. Looks good though. \$22

HRO 60 parts: Coil clamps for HRO-60. These are used to unseat the coil when you are removing it. Surface oxidation but these should clean up well. \$10/ pair PPD

#### Tektronix Oscilloscope Probes

I have a ton of Tek probes in excellent condition. P6006, P6008, P6009, P6028, P6110, P6112 and lots more. Plus some HP probes and generic 30mhz types that are new in the packing. Please e-mail me if you need something before I liquidate these on eBay.

WANTED: 12V, 20 Amp or better commercial power supply. Prefer Astron, Triplite or similar.

\*\*\*\*\*  
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-----  
Message-Id: <5.0.0.25.2.20010226114135.032ef900@sdct-sunsv1.ncsl.nist.gov>  
Date: Mon, 26 Feb 2001 11:42:06 -0600  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Roy Morgan <roy.morgan@nist.gov>  
Subject: Re: WTB: TMC A-1397 PS  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 01:03 PM 2/25/01 -0500, JONWEINER@aol.com wrote:  
>I'm looking for a TMC model A-1397 power supply. Used with the model SBE-2 1  
>watt exciter.

Me, too.

I also need a copy of the manual for the SBE-2.

- Roy Morgan, K1LKY since 1959  
7130 Panorama Drive, Derwood MD 20855  
Home: 301-330-8828 Work: Voice: 301-975-3254, Fax: 301-948-6213  
roy.morgan@nist.gov --

-----  
Date: Mon, 26 Feb 2001 11:43:02 -0500  
From: "ROBERT W. DOWNS" <RWDDowns\_WA5CAB@compuserve.com>  
Subject: RE: ART-13 Trouble  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-ID: <200102261143\_MC2-C6D8-EE53@compuserve.com>  
MIME-Version: 1.0  
Content-Transfer-Encoding: quoted-printable  
Content-Type: text/plain;  
charset=ISO-8859-1  
Content-Disposition: inline

Mike,

You haven't said yet (or at least not to the list) what the current rating  
of your 28VDC supply is. The cathode rating of the 813 is 10V/5A, and it  
is in series with the 811's. However, the cold starting current will be  
higher. Plus the heater current of the other tubes in the transmitter. =

Also, if you apply 28 volts and the channel select knob is not in the sam=

e  
position as it was the last time that the autotune was cycled, the autotune  
motor will try to start upon application of 28 volts.

Further to what Mike said, or to add details, be sure that the mode switch  
is in AM. Put the channel select switch in REMOTE, and if you have it,  
disconnect the C-87 Remote Control. Unplug any key or microphone. This  
should ensure (a) that the autotune motor does not try to cycle, and (b)  
the dynamotor (if you have one) does not attempt to start.

73,  
Robert Downs  
<RWDDowns\_WA5CAB@compuserve.com>  
Houston

-----  
Message-Id: <3.0.1.32.20010226110013.00fe4ec0@vuse.vanderbilt.edu>  
Date: Mon, 26 Feb 2001 11:00:13 -0600  
To: Old Tube Radios <boatanchors@theporch.com>  
From: "A. B. Bonds" <ab@vuse.vanderbilt.edu>  
Subject: PS issues redux  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

I've been trying to test a 1.7 amp dynamotor (28v) with a nice solid state,  
highly regulated Lambda supply rated at 7 amps, 28 v. No go. The starting  
current is clearly higher. When the dynamotor is connected, the Lambda  
crowbars down to about 2v and sits there until reignited. (I would note  
that it also hunkers down when I use it to power my R-392, which has a  
running current of about 3 amps. However, in that case, it recovers after  
about ten seconds and all is hunky-dory.)

So (a) what is the starting current for a small dynamotor, anyhow, and (b)  
one guesses that a big crude unregulated battery-charger-type supply is in  
order, yes?

73            A. B. Bonds

-----  
From: W7QH0@aol.com  
Message-ID: <ba.1212be0e.27cbe6b7@aol.com>  
Date: Mon, 26 Feb 2001 12:04:55 EST  
Subject: Re: [MilSurplus] BN?  
To: Old Tube Radios <boatanchors@theporch.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"

Content-Transfer-Encoding: 7bit

Don,

The BN was an IFF transmitter/receiver operating in the 157 to 187 mHz band. Superhet receiver with a wide band IF covering 28 to 32 mHz. Designed to operate from 110 volt 60 Hz. RF section used by Hams in the early days as a 2 meter converter.

Dennis D. W7QHO  
Glendale, CA

-----  
Date: Mon, 26 Feb 2001 12:02:52 -0500  
From: "Mike B. Feher" <n4fs@monmouth.com>  
Subject: Re: PS issues redux  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <012201c0a015\$f6739060\$20c5be18@n4fs>  
MIME-version: 1.0  
Content-type: text/plain; charset=iso-8859-1  
Content-transfer-encoding: 7BIT

Dear A. B. -

As you know a dynamotors starting current is essentially equivalent to that of a short circuit (resistance of the windings), unless you get the motor to turn. You may try some lubrication ( not necessarily a solution). The difference with the R-392 is that after initial application of power the filaments slowly warm up and draw less current to make your supply happy. Use a supply without any foldback capability. 73 - Mike

Mike B. Feher, N4FS  
89 Arnold Blvd.  
Howell NJ, 07731  
(732) 901-9193

----- Original Message -----  
From: "A. B. Bonds" <ab@vuse.vanderbilt.edu>  
To: "Old Tube Radios" <boatanchors@theporch.com>  
Sent: Monday, February 26, 2001 12:00 PM  
Subject: PS issues redux

> I've been trying to test a 1.7 amp dynamotor (28v) with a nice solid state,

> highly regulated Lambda supply rated at 7 amps, 28 v. No go. The  
starting  
> current is clearly higher. When the dynamotor is connected, the Lambda  
> crowbars down to about 2v and sits there until reignited. (I would note  
> that it also hunkers down when I use it to power my R-392, which has a  
> running current of about 3 amps. However, in that case, it recovers after  
> about ten seconds and all is hunky-dory.)  
>  
> So (a) what is the starting current for a small dynamotor, anyhow, and (b)  
> one guesses that a big crude unregulated battery-charger-type supply is in  
> order, yes?  
>  
> 73 A. B. Bonds  
>  
>

-----  
Message-ID: <03d001c0a024\$15f4b780\$0300a8c0@bill>  
From: "Bill Weinel" <tuberadio@mindspring.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Swan 1200 Knobs Needed  
Date: Mon, 26 Feb 2001 13:43:57 -0500  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Greetings fellow anchorites:

I am in need of (3) main tuning knobs for a Swan 1200w or 1200x amplifier.  
The ones on my amp are dingy and have some corrosion on the aluminum  
brights. If anyone has some laying around in the junkbox that they'd part  
with, please drop me a line.

73 de bill, w4whw

-----  
Date: Mon, 26 Feb 2001 16:35:30 -0500 (EST)  
From: "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>  
Message-Id: <200102262135.QAA16420@aa4rm.ba-watch.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: WTT - Halli TV Svc. Manuals

Have one for 1075 '20" Plastic Table Model'

Also another for chassis A[G,H,J,L,R,Y]1200D 'VHF Chassis'

Like a Rider's #1 TV manual.

Tks

Marty

-----  
Date: Mon, 26 Feb 2001 13:54:40 -0800  
From: Arden Allen <gumbear@pacbell.net>  
Subject: Re: PS issues redux  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <0G9D00DUGWUCCP@mta6.snfc21.pbi.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=ISO-8859-1  
Content-transfer-encoding: 7bit

AB;

> So (a) what is the starting current for a small dynamotor, anyhoo, and  
(b)  
> one guesses that a big crude unregulated battery-charger-type supply is  
in  
> order, yes?

It's nice to be able to run a radio off of a well regulated power supply. Your supply is going into *\*current limit\**, it is not "cowbarring". A *\*crow bar\** is a deliberate short circuit (thus the name) across the output of the power supply to protect the load should the power supply fail and begin to apply more voltage to the load than it is programmed to give. Current limit protects the power supply from too low of a load resistance. When the maximum current is exceeded the voltage drops to maintain the current at a constant value. If the power supply has *\*foldback current limiting\** then the current is reduced as the load resistance decreases. In either case, the object is to protect the power supply.

You can use a husky diode (100 amps or more) to allow a battery to supply the starting surge and then when the current drops the power supply will take up the load. A battery charger, unless tightly regulated, will put out too much voltage for a diode switch to work properly. The regulated supply has to put out at least 0.7 volts more than the battery. A resistor in parallel with the diode will trickle charge the battery. Hope this helps.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

-----  
Date: Mon, 26 Feb 2001 20:23:42 -0600 (CST)  
From: Don Reaves <dr@cei.net>



To: Old Tube Radios <boatanchors@theporch.com>  
cc: <boatanchors@theporch.com>  
Subject: Re: [MilSurplus] BN?  
Message-ID: <Pine.LNX.4.30.0102262022140.25742-100000@wa5bbs.radiohome.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Thanks, Dennis,  
I heard from other sources same description except 400HZ so perhaps they  
had two types of supply.

See my next post. Maybe someone can adopt this equipment.

73

On Mon, 26 Feb 2001 W7QH0@aol.com wrote:

> Don,  
>  
> The BN was an IFF transmitter/receiver operating in the 157 to 187 mHz band.  
> Superhet receiver with a wide band IF covering 28 to 32 mHz. Designed to  
> operate from 110 volt 60 Hz. RF section used by Hams in the early days as a  
> 2 meter converter.  
>  
> Dennis D. W7QH0  
> Glendale, CA  
>

--

Don Reaves W5OR Little Rock AR  
EM34, CCA, QCWA, AMI, ARRL LM  
dr@cei.net R-390 list manager  
www.militaryradio.com

-----  
Date: Mon, 26 Feb 2001 22:10:11 -0500 (EST)  
From: "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>  
Message-Id: <200102270310.WAA16850@aa4rm.ba-watch.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: The Duke & the TCS

AKA "In Harms Way"

2nd time this month.

Tonite on AMC @ 0330Z. 2:45 of stuff leading up to shots of the  
Yamato & the Navy version of a B25 with Kirk Douglas @ the yoke.

Not to mention T17 mike, a ground-based ART13.

Heady stuff

Ends with now-deemed unneeded battle of Santa Cruz brought about by confrontation between Adm. Nimitz & Gen. MacArthur.

-----  
Date: Mon, 26 Feb 2001 22:16:05 -0500 (EST)  
From: "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>  
Message-Id: <200102270316.WAA16867@aa4rm.ba-watch.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: "5 watt frequency"

G F Gay mentions skip distances as far as San Diego-Hawaii on the "5 watt frequency"

This was ~1943.

Anyone think this mighta been 100-156 / 140-144 mcs VHF? Navy WE 233 / ARC4???

No further explanation in "Sole Survivor" except "5 watt frequency" skip brought back more than 1 aircraft. Pg. 265.

-----  
Date: Mon, 26 Feb 2001 21:34:14 -0600 (CST)  
From: Don Reaves <dr@cei.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BC-604, BN units available, LA area  
Message-ID: <Pine.LNX.4.30.0102262132330.25742-1000000@wa5bbs.radiohome.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=ISO-8859-1  
Content-Transfer-Encoding: 8BIT

Thanks everyone for your quick and informative replies identifying the Navy BN unit, establishing BN as a legitimate Navy model number. It is an IFF transmitter/receiver unit operating in the VHF range. Apparently it was converted in the surplus heydays to function as a 2 meter down converter with a 10 meter range IF. Doubtful that the value of this equipment would warrant any shipping charges. I could be wrong!

If someone is interested in adopting these units and you are in the Los Angeles area, if have a contact for you. I hesitate to publish John's full name and email on the lists so you need to email me direct for that. Here is a summary of his notes to me.

- - - - -

To: dr@cei.net  
Subject: inquiry

I have found the following in my deceased step father's garage.† The descriptions are exact from the metal ID plate†on the equipment.† Any suggestions?

†

1.† Signal Corp-US Army

†††† Radio Transmitter BC-604-DM

†††† Serial # 13441

†††† Made by Federal Telephone and Radio Corp.

†††† Newark, NJ

†

2.† Model BN

†††† Radio Transmitting and Receiving Equipment

†††† Supply 105-125V† 1 0 50-125

†††† Serial 875

†††† Navy Dept

†††† Bureau of Ships

†††† Contractor Farnsworth Television and Radio Corp

†††††

3.† Same as # 2, but serial # 862

†

All appear to be in good condition.† The equipment is quite heavy and I have no further information.†

AND

To: Don Reaves <dr@cei.net>  
Subject: Re: inquiry

Don, I am in the greater Los Angeles area. Since I am not a collector, I am looking to dispose of the equipment, hopefully at a reasonable price to someone who is interested. I would like an objective estimate of collector value, then we can work out the logistics. Thanks, and I look forward to any further information you might develop.

John

- - - - -

Hopefully someone can keep this stuff from going to the dumpster.

Don  
dr@cei.net

-----  
From: W7QH0@aol.com

Message-ID: <e5.2dd6c43.27cc7b5c@aol.com>  
Date: Mon, 26 Feb 2001 22:39:08 EST  
Subject: Re: [MilSurplus] BN?  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: boatanchors@theporch.com  
MIME-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"  
Content-Transfer-Encoding: 7bit

In a message dated 2/26/01 6:23:03 PM, dr@cei.net writes:

>I heard from other sources same description except 400HZ so perhaps they  
>had two types of supply.

Yes, they did.

Dennis D. W7QH0

-----  
Message-Id: <3.0.6.32.20010227084004.007a9d70@pop.mindspring.com>  
Date: Tue, 27 Feb 2001 08:40:04 -0500  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Allen Cutts <cacutts@mindspring.com>  
Subject: Dalton Hamfest Photos  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

All,

Well hamfest season has officially started here in Georgia with the 2001 Dalton Georgia hamfest this past Saturday. I have 12 photos of the event at the following URL:

<http://www.mindspring.com/~cacutts/radio/ba/hamfest/dal01a.html>

All in all, this was a great hamfest with good deal more vintage equipment showing up. Hope you enjoy the photos and if you go back to my boatanchor page there are links to other photos of past hamfest too.

73s,

Allen Cutts  
N4OZI

-----

Message-ID: <002a01c0a0d6\$9bd8dc20\$c05e0387@satellite>  
From: "Roberta J. Barmore" <rbarmore@email.msn.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Gone  
Date: Tue, 27 Feb 2001 11:01:54 -0500

Please drop me from this list immediately.

-----  
Message-Id: <v03007802b6c17d7eea15@[132.235.46.182]>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Date: Tue, 27 Feb 2001 12:16:16 -0500  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Richard Post <post@ouvaxa.cats.ohiou.edu>  
Subject: Panoramic Panadaptor lives

Have been working on a Panoramic Radio PCA T-200 Panadaptor (Same as Halli SP-44) that arrived without the transformer or rectifiers. Grafted in the Stancor P-6010 for which I had asked the specs. Also placed a little NOS filament transformer rated at 1500 test voltage under the chassis to feed the CRT. Subbed silicon diodes for the rectifier tubes. Both B+ and the CRT voltages were a bit high. Placed a 100K resistor at the input to the voltage doubler to reduce the CRT voltage. Changed to a choke input for B+ to reduce its voltage. Result was a nice sharp green trace and only a slightly warm power transformer. Replaced several capacitors (including the one feeding the headphone jack. Don't care for B+ on my headphones.)

Ran into an oscillation problem that did not go away after I pulled the sawtooth generator tube. Thought it might be in the IF stages. Bridged all of the bypass caps (ground clip on one end of a cap and touch other end in turn to each point of interest.) Finally determined the problem to be spurious oscillation in the 6AC7 oscillator circuit. A 3K ohm resistor between B+ and the RF choke at the 6AC7 plate had gone DOWN in value to about 200 ohms. Replaced resistor and got the classic pip trace from my sig generator that move nicely up and down the scale when the generator was moved 50 KHz or so up or down from the 455 KHz IF.

Will do a thorough alignment since the center frequency control adjustment is definitely off.

There are a number of variations in the circuitry of the Panadaptor including the addition of a sync control under the chassis in later versions. The CRT changed from 902A to 2AP1. The transformer changed from an additive 200 volt separate winding for the CRT high voltage to a tap. Some later cabinets have lots more perforations for ventilation. Despite all this, the model number did not change. I have both a later printed

manual and an early manual done on a ditto machine. The early manual more closely matches my example.

Definitely a neat piece of equipment. My first experience with a panadaptor.

73,

Rich

Boatanchor Pix website - KB8TAD  
<<http://oak.cats.ohiou.edu/~postr/bapix/>>

Museum of Radio and Technology  
<<http://oak.cats.ohiou.edu/~postr/MRT>>

-----  
Message-Id: <200102271742.JAA03415@falcon.prod.itd.earthlink.net>  
Subject: FS: Power transformers  
Date: Tue, 27 Feb 2001 12:42:27 -0500  
From: "Joseph W. Pinner" <kc5ijd@sprintmail.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"

While going through some items in my storage building, I found the following power transformers. I have two of them. They are used mil spec sealed units.

They are rated at:  
1240 VCT @ 75 ma  
and  
920 VCT @ 70 ma

If anyone is interested, \$ 20 each plus shipping.

73

Joseph W Pinner +  
Kingston, TN  
KC5IJD / NNN0PHR  
EMail: kc5ijd@sprintmail.com

-----  
Message-Id: <4.3.2.7.2.20010227103326.00cefd50@mail.islandnet.com>  
Date: Tue, 27 Feb 2001 10:37:05 -0800  
To: Old Tube Radios <boatanchors@theporch.com>

From: jan@skirrow.org  
Subject: Re: Panoramic Panadaptor lives  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

Congrats on getting this working. I also have one, which is all original. I found quite a few "production changes" as well. Also, a lot of the resistors were way off spec. It's an interesting gadget, and a nice part of any show of 1940s/50s radios. But using it tells you a lot about how much the field has changed! I made the mistake of trying it first with a radio that had quite a narrow IF bandpass. Once I connected it to a radio of the same vintage, that also had a very broad IF, it worked pretty well. As someone else said tho - it is most interesting on the high bands where there is lots of space between stations - kinda like the lower bands were many years ago.

Jan Skirrow, VE7DJX

... in beautiful British Columbia, Canada

\*\*\* <http://skirrow.org/Boatanchors/> \*\*\*

-----  
Message-Id: <4.3.2.7.2.20010227101436.00cd5b50@mail.islandnet.com>  
Date: Tue, 27 Feb 2001 10:45:49 -0800  
To: Old Tube Radios <boatanchors@theporch.com>  
From: jan@skirrow.org  
Subject: Re: PS issues redux  
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At 01:54 PM 2/26/01 -0800, someone wrote:

> > So (a) what is the starting current for a small dynamotor, anyhow, and

I use x10 as a rule of thumb. Depending on how big your dynamotor is, the time for it to start spinning enuff to generate a back emf and start dropping the current from short circuit to normal will vary greatly and change the demand on the power supply. A 10A supply handles a command set dyno easily. It is useful tho to have a supply that recovers from a current overload quickly. Some do seem to latch down and will not reset, or may take awhile to do it.

And then Arden said:

>You can use a husky diode (100 amps or more) to allow a battery to supply  
>the starting surge and then when the current drops the power supply will

>take up the load. A battery charger, unless tightly regulated, will put  
>out too much voltage for a diode switch to work properly. The regulated  
>supply has to put out at least 0.7 volts more than the battery. A resistor  
>in parallel with the diode will trickle charge the battery. Hope this  
>helps.

Ah yes ... I decided awhile back to run an ART-13 with dyno from 28VDC supplies. I had a bunch of 12A Lambdas that together could supply about 70A - around twice the maximum draw of the ART-13/dyno once it's up to speed. I used a diode with each supply to act as a load balancer. This didn't work - the Lambdas would go down when switched on, the control relays in the ART-13 would open, the Lambdas would come back up, the relays would close, the Lambdas would go down ..... etc. Exciting.

I then added a bank of reeeeely big caps that I calculated would hold enuff charge to get the DY-17 spinning enuff so the power supplies could handle the load. Needed more diodes to protect everything. This worked much better. The caps would discharge, the dyno would start, the Lambdas would go off-line, the relays would open. The supplies would come up instantly, the caps would charge part way, the relays would close and the dyno would get another kick .... etc. After 3-4 cycles the dyno would be up to speed and all worked properly. Pretty exciting, but not good engineering! An ART-13/DY-17 lurching to life this way is an experience however. But I found diminishing returns: there was an optimal capacity for my storage bank and beyond that nothing improved.

The limit seemed to have to do with the characteristics of the ART-13 control relays combined with the inevitable voltage drop across my diodes, interacting with the cap charge circuit. The only way my approach would work properly (i.e. no cycling and instant start) would be to run the thing w/o the diodes (which is very risky of the Lambdas - especially with the transient the dyno would generate should the power fail at full speed) or to alter the relay circuit so that the relays would latch closed for a short time to allow the dyno a tiny bit more time to get up to speed so the power drain would be within the Lambda's capability.

So that's were the project sits. I hadn't considered doing what Arden suggests, but this would be simple. Must think about it!

My pre-Arden plan was to use a couple of modest capacity storage batteries to start the radio and then switch over to the Lambdas once the dyno is up to speed. This way one charge of the batteries should last for quite a few starts and it would be simple to apply some of the Lambda power back to the batteries to top them up between uses. The only real difference here from my previous schemes would be to use a momentary contact "starter" switch, a starter solenoid to connect the batteries momentarily, and another relay to switch over to the Lambdas once the dyno was spinning. This would actually be about as long as it would take to throw the toggle switch and return it



to off. I have all the parts, but the list of projects is - as always - too long!

Ain't old radios fun!

Jan Skirrow, VE7DJX

... in beautiful British Columbia, Canada

\*\*\* <http://skirrow.org/Boatanchors/> \*\*\*

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Message-ID:  
<07A064EA6042D4118A62009027F70E770517CD@nt\_exchange.vifp.monash.edu.au>  
From: Morris Odell <MorrisO@vifp.monash.edu.au>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RE: PS issues redux  
Date: Wed, 28 Feb 2001 08:50:28 +1100  
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Hi AB,

There have been plenty of replies to your question and I have little to add except the following:

> So (a) what is the starting current for a small dynamotor,  
> anyhoo

You can get an estimate of this by putting an ohmmeter across the stationary dyno terminals. You will need it to be on a low low range! Divide 28 volts by the resistance and you will have the (surprising) answer. DC machines have an instantaneous starting current defined by the non-rotating resistance of the armature in parallel with any shunt field resistance. The latter is higher and quite inductive and so current might not build up fully for a short time after the power is connected. The major contribution to starting current is armature resistance. This is usually very low. As the machine builds up speed a back emf is generated which opposes the applied voltage. The running current is  $(V_t - E_g)/R_a$  where  $V_t$  is terminal voltage,  $E_g$  is back emf and  $R_a$  is armature resistance. For  $E_g$  to build up properly there needs to be sufficient field excitation so if there is a shunt field fed by the supply and  $V_t$  is pulled down by the rotor inrush, starting will be hindered.

If the supply is current limited the starting current will be lower than  $V_t/R_a$  but it will need to be high enough for enough torque to be developed

to allow rotation to start. Provided this happens and the machine is not loaded too heavily it will run up. As it runs up the current demand falls and as long as rated  $V_t$  is maintained all will be well.

Hope this helps

73, Morris

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End of BOATANCHORS Digest 3115

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